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NATIONAL COMMUNICATIONS FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION

GUIDELINES FOR THE TECHNICAL REVIEW OF GREENHOUSE GAS INVENTORIES

Draft guidelines for the technical review of Annex I Parties' greenhouse gas inventories (Greenhouse gas review guidelines)

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its tenth session, took note of and supported the technical review process related to greenhouse gas (GHG) inventories of Annex I Parties outlined in document FCCC/SBSTA/1999/3. It endorsed the following elements of that technical review process: annual initial checks, annual synthesis and assessment, and individual reviews, and advised the Subsidiary Body for Implementation (SBI) to consider guidelines for such a technical review at its eleventh session, with a view to a decision on such guidelines being adopted by the Conference of the Parties (COP) at its fifth session (see FCCC/SBSTA/1999/6, para. 30).

2. The SBI, at its tenth session, took note of the above-mentioned conclusions of the SBSTA and requested the secretariat to prepare draft guidelines for technical reviews of GHG inventories on the basis of document FCCC/SBSTA/1999/3 as well as a work plan for the technical review process, including operational arrangements, for the period 2000-2002, for consideration at its eleventh session.

3. The SBI requested the secretariat to include in the draft work plan different approaches for individual reviews, including sending inventory information to experts, expert meetings in a single location and in-country visits of experts, or combinations of each, in order to assess these approaches. It also invited Parties to submit their views on the draft guidelines by 1 October 1999. The SBI agreed on the preliminary elements of a draft COP 5 decision relating to the technical review process (see FCCC/SBI/1999/8, para. 28 and annex I).

B. Scope of the note

4. This note has been prepared by the secretariat in response to the above mandate. It contains a brief explanatory note and draft GHG review guidelines prepared by the secretariat (annex I). The draft GHG review guidelines suggest possible elements for the review process, operational arrangements and a work plan. It is anticipated that these draft GHG review guidelines will be used for the period 2000-2002. It is expected that after this trial period, during which different approaches outlined in the draft will be tested, the GHG review guidelines will be amended, taking into account the experience gained and the new tasks and requirements for the review process.

5. The draft GHG review guidelines follow closely the approaches suggested in document FCCC/SBSTA/1999/3 and endorsed by the SBSTA at its tenth session. For convenience, the preliminary elements of a draft COP 5 decision relating to the technical review process, as agreed by the SBI at its tenth session, are also attached to this note (annex II).

C. Possible action by the SBI

6. The SBI may wish to consider the draft GHG review guidelines, taking into account Parties' views received by the secretariat and compiled in document FCCC/SBI/1999/MISC.7, with the aim of submitting the GHG review guidelines for adoption at the fifth session of the COP.

II. EXPLANATORY NOTE

A. Content

7. The draft GHG review guidelines consist of three parts. Part I relates to the overall process and describes the purposes, approaches and elements of each stage of the technical review, namely initial checks, synthesis and assessment, and individual reviews. Initial checks are expected to be conducted by the secretariat, synthesis and assessment also by the secretariat with the possible assistance of experts nominated by governments. Reviews of individual inventories would be conducted by teams of government-nominated experts and would be coordinated by the secretariat.

8. Parts II and III contain a work plan and operational arrangements for all three stages of the review process. The work plan identifies a schedule of activities related to the technical review, whereas operational arrangements suggest the way the work could be organized, including procedures for nomination of experts, their selection for participation in review activities, administrative arrangements, etc.

9. An attempt has been made to structure the GHG review guidelines so as to avoid duplication between the different parts. In designing the technical review of GHG inventories, the secretariat has drawn on its experience with in-depth reviews of national communications from Annex I Parties. The inventory review could thus be seen as an expansion of the existing review process, being further developed and elaborated with specific emphasis on GHG inventories.

B. Issues for further consideration

Matters related to processing and dissemination of information

10. The collection, processing, storing and retrieving of inventory data submitted annually by Annex I Parties to the secretariat will require development of a specialized database designed to serve the needs of the technical review process. In addition, software tools will be needed to process and analyse the GHG inventory data. Parties may wish to provide support to these activities through contributions to the Trust Fund for Supplementary Activities (see FCCC/CP/1999/INF.1).

11. Publishing documents on the UNFCCC web site is the most expedient and cost-effective way of disseminating information. This is especially true since the publication and translation services at the United Nations Office in Geneva are currently overloaded with the volume of documentation coming from the UNFCCC secretariat. Parties may wish to reflect on ways in which the results could be published at different stages of the technical inventory review process and provide guidance to the secretariat as appropriate, in particular on possible sources for funding the translation and publication of the relevant reports in hard copy, if required.

Matters related to the nomination and participation of experts

12. The preliminary elements of a draft COP 5 decision relating to the technical review process, agreed by the SBI at its tenth session (reproduced in annex II to this note), invite Parties "to nominate inventory experts with expertise in relevant sectors by 15 April 2000". It may be noted that the secretariat maintains a number of rosters of experts nominated by governments for various purposes (see FCCC/SBSTA/1999/9). Nomination forms for technology and methodology rosters are, in principle, sufficiently detailed to identify experts with expertise in sectors and gases relevant to the technical review of inventories. However, it may be advisable for Parties to review the list of their nominees in view of the specific tasks of the technical review of GHG inventories and/or nominate new experts, if required. It is expected that Parties in their nominations would indicate the sectors and gases in which experts possess specific knowledge and skills.

13. Experience from the in-depth reviews of national communications has shown that government-nominated experts are fully able to devote their time to the review during the in-country visit, but suffer severe time constraints both beforehand, in making the necessary preparations, and after the visit in making contributions to the in-depth review report. It is essential to the technical review process that government-nominated experts are allowed the time needed to fully prepare for and complete the tasks assigned. For this reason, the operational arrangements in the GHG review guidelines state that "it is expected that, in general, such experts will be available to take part in review activities either based in their own offices, at the secretariat in Bonn or in a country being reviewed. Having agreed to take part in a particular synthesis and assessment or individual review the expert and his or her respective employer are then expected to fully commit the required time". To provide the required time, it is desirable that governments make the necessary institutional and funding arrangements in advance of an expert's participation. This is especially important in the case of desk reviews where experts will have competing demands on their time unless the appropriate arrangements are made.

14. In relation to funding, it may be noted that where reviews involve travel the secretariat will be able to pay the travel and subsistence costs for a limited number of experts (five to seven per year) from non-Annex I Parties and Annex I Parties with economies in transition, in line with existing practice and the proposed programme budget for the period 2000-2001; experts from Annex II Parties are expected to be funded by their respective governments. Additional funds

will be needed to conduct the technical reviews to the extent suggested in the draft GHG review guidelines.

15. At present, there are no provisions to compensate experts for the time they spend working on the review in their own offices. Parties may wish to consider whether additional financial support should be provided in this case, especially if this would enhance the availability of experts and ensure their full commitment for up to three weeks a year as envisaged under the technical review process.

Annex I

DRAFT GUIDELINES FOR THE TECHNICAL REVIEW OF ANNEX I PARTIES' GREENHOUSE GAS INVENTORIES (GREENHOUSE GAS REVIEW GUIDELINES)

PART I

General description of the technical review process

A. Objective

1. The objective of these guidelines is to promote consistency in the review of Annex I Parties' annual greenhouse gas (GHG) inventories and to establish a process for a thorough and comprehensive technical assessment of inventories. This process, comprising a number of stages, should increase Parties' confidence in greenhouse gas inventories. Each stage of the technical review process considers different aspects of the inventories to varying extents, in such a way that all of the purposes described below are achieved by the end of the process.

B. Purposes of the technical review of greenhouse gas inventories

2. The purposes of the technical review of Annex I Parties' greenhouse gas inventories are:

(a) To ensure that the Conference of the Parties (COP) has adequate information on GHG inventories and GHG emission trends;

(b) To provide the COP with a thorough technical assessment of the implementation of Annex I Parties' commitments under Articles 4.1(a) and 12.1(a) of the Convention;

(c) To gain experience relevant to the preparation of guidelines related to Articles 5, 7 and 8 of the Kyoto Protocol;

(d) To examine, in a facilitative, non-confrontational, open and transparent manner, the quantitative data and qualitative information submitted by Annex I Parties in accordance with the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories[1]; and

(e) To assess the transparency, consistency, comparability, completeness, and accuracy of Annex I Parties' inventories, as defined in the UNFCCC reporting guidelines on annual inventories, in order to assist all Parties in improving the quality of their GHG inventories.

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[1] See FCCC/SBSTA/1999/6/Add.1, annex I.

C. General approach

3. The technical review process comprises three stages:

(a) Initial check of annual inventories;

(b) Synthesis and assessment of annual inventories; and

(c) Expert review of individual inventories (individual review).

4. The stages of the technical review process complement each other so that, in general, for each Party, a stage is concluded before the next one is undertaken.

D. Initial check of annual inventories

5. The purposes of the initial checks of GHG inventories are:

(a) To check the completeness of the submitted information;

(b) To conduct a preliminary check of the consistency of information submitted against the requirements of the UNFCCC reporting guidelines on annual inventories;

(c) To facilitate the automated entry of GHG inventory data submitted in the common reporting format[2] into the secretariat database; and

(d) To assist the conduct of subsequent review stages.

6. The initial checks cover the national inventory submission and, in particular, the data electronically submitted in the common reporting format.

7. The initial checks consist of:

(a) Determining if each Annex I Party provided data in the correct electronic formats;

(b) Determining if data are missing from the national inventory submission (based on the UNFCCC reporting guidelines on inventories) and identifying inconsistencies in the data; and

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[2] See FCCC/SBSTA/1999/6/Add.1, annex II.

(c) Examining the trend and recalculation tables for consistency with previously submitted inventory data.

8. The results of initial checks will be presented in a status report for each Annex I Party, mainly in tabular format.

F. Synthesis and assessment of greenhouse gas inventories

9. The purposes of the synthesis and assessment of Annex I Parties' greenhouse gas inventories are:

(a) To assess the comparability and further assess the consistency and completeness of inventory information;

(b) To present Annex I Parties' inventory data in a consistent manner;

(c) To further check for adherence to the UNFCCC reporting guidelines on annual inventories;

(d) To facilitate analysis of inventory data and other relevant information across Annex I Parties;

(e) To provide an overview of common methodological issues relating to Annex I Parties' inventories; and

(f) To identify issues for further consideration during the expert review of individual inventories.

10. The synthesis and assessment will be carried out annually by the secretariat, with the possible assistance of nominated experts.

11. The synthesis and assessment will cover the national inventory submission, supplementary information submitted by Annex I Parties and previous national inventory submissions, where relevant.

12. The results of this stage of the technical review will be presented in a synthesis and assessment report, divided into two parts and an addendum. Part I will provide information allowing comparisons across Annex I Parties and describe common methodological issues. Part II will contain a preliminary analysis of individual Annex I Parties' inventories, in particular, to identify outstanding issues requiring clarification during the individual review stage of the process. The addendum will contain tables and graphs based on Annex I Party inventory data.

13. Part I of the synthesis and assessment would, *inter alia*:

(a) Compare recalculated inventory data between the latest and previous submission for the base and subsequent years;

(b) Compile implied emission factors for relevant IPCC source categories across Annex I Parties and make comparisons with ranges contained in the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, where feasible;

(c) Compile the results of comparisons of emission estimates for carbon dioxide from fuel combustion (sectoral approach) with the Intergovernmental Panel on Climate Change (IPCC) reference approach; and

(d) Compile and compare reported actual and potential emissions of hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.

14. Part II of the synthesis and assessment would, *inter alia*:

(a) Compile issues requiring further clarification during the individual inventory review stage; and

(b) Provide information for use by experts during the next stage; in this regard it would:

(i) Compare activity data and implied emission factors with data from previous submissions to identify, to the extent possible, any irregularities or inconsistencies;

(ii) Compare activity data with relevant data from external authoritative sources if feasible; and

(iii) Identify sectors for which emission estimates could be reconstructed by experts during individual reviews, if required.

15. The addendum will contain information on greenhouse gas emissions by sources and removals by sinks for gases and sectors, and their trends.

F. Review of individual greenhouse gas inventories

16. The purposes of the review of individual Annex I Parties' inventories by government-nominated experts are:

(a) To assess the transparency and accuracy of information and to further assess the consistency of information;

(b) To clarify issues that have been raised during the synthesis and assessment and to identify reasons for departure from the requirements of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories and the UNFCCC reporting guidelines on annual inventories;

(c) To further assess adherence of greenhouse gas inventories to the requirements of the UNFCCC reporting guidelines on annual inventories and the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories;

(d) To assess the extent to which *good practices*,[3] if agreed upon by the COP, are used;

(e) To partially reconstruct the emission estimates for sectors that have been identified during the synthesis and assessment;

(f) To assess adherence to requirements for record keeping, as requested in the UNFCCC reporting guidelines on annual inventories;

(g) To assist Annex I Parties in identifying areas for further improvement in their inventories; and

(h) To assist Annex I Parties, the IPCC and the secretariat in the development and improvement of methodologies for preparation and reporting of greenhouse gas inventories.

17. Individual reviews will be carried out by teams of government-nominated experts, coordinated by the secretariat, in accordance with the purposes referred to in paragraph 16 above. The individual review will cover the Annex I Party's national inventory submission, supplementary material submitted by the Party and, as appropriate, previous inventory submissions. The expert team will consider the 'paper trail' of an inventory from the collection of data to the reported emission estimate.

18. During the trial period 2000-2002 the following three operational approaches for the individual review and their possible combinations, described in part II of the GHG review guidelines, will be tested: sending inventory information to experts, expert meetings in a single location and in-country visits of experts.

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[3] The Intergovernmental Panel on Climate Change is currently developing guidance on *good practice* as part of its work related to uncertainties in inventories. Guidance on *good practice* may include, *inter alia*, advice on the choice of methodology, emission factors, activity data, and uncertainties, and on a series of quality assessment and quality control procedures which may be applied during the preparation of inventories.

19. The individual review would, *inter alia*:

(a) Examine procedures and institutional arrangements for inventory development and management;

(b) Assess the extent to which issues and questions raised during previous review stages have been resolved;

(c) Examine departures from the requirements of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories and the UNFCCC reporting guidelines on annual inventories;

(d) Assess the extent to which the guidance on *good practice* is used,[4] if agreed upon by the COP, in particular noting the:

(i) selection and use of methodologies and assumptions;

(ii) development and selection of emission factors;

(iii) collection and selection of activity data;

(iv) recalculations of previously submitted inventory data;

(v) reporting of methodologies used for estimating uncertainties; and

(vi) inventory quality assurance and quality control procedures;

(e) Partially reconstruct the emission estimates, where recommended at the previous stage;

(f) Examine record keeping and documentation procedures;

(g) Identify areas for further improvement of the inventories; and

(h) Note possible ways in which to improve methodologies and reporting of inventory information.

20. The expert team will produce an individual inventory report based, *inter alia*, on the results of consideration of the issues listed in paragraph 19 above. The individual inventory report, in general, should not exceed 25 pages.

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[4] See footnote 3.

G. Systematic updating of the guidelines

21. Future decisions taken by the COP on matters related to the review of greenhouse gas inventories under the Convention shall apply *mutatis mutandis* to these guidelines, which will be updated accordingly.

PART II

Work plan for the technical review process

22. The three stages of technical reviews described in part I above will be implemented during the trial period 2000-2002. All timing is subject to the timely provision of inventory information by Annex I Parties in the requested format and the prompt response by Parties to all requests for information.

23. Annex I Parties should provide their annual inventory submissions by 15 April, in accordance with decision 11/CP.4 (FCCC/CP/1998/16/Add.1). The secretariat will acknowledge receipt of an annual inventory submission by posting information on the UNFCCC web site about the date and content of the submission.

24. The secretariat will aim to produce a draft status report on each Party's inventory submission within four weeks of receipt of an annual inventory submission or replies to possible queries.

25. The synthesis and assessment stage is scheduled for the third quarter of each year. Government-nominated experts, who may assist with the preparation of a synthesis and assessment report, are expected to be available for approximately two to three weeks, including time spent in Bonn and time spent before and after the visit working in their respective countries.

26. The three approaches for review of individual inventories by government-nominated experts (individual review), as outlined in document FCCC/SBSTA/1999/3 and described below, as well as combinations of these approaches, will be tested. The start dates for each individual review as well as for combined approaches will, to a large extent, depend on the time-scale for completion of the initial checks and synthesis and assessment, on the readiness of Annex I Parties to volunteer for participation in one or in a combination of approaches, and on the agreed timetables for the individual review.

27. While testing the first approach, a desk review, experts are expected to review five to seven inventories. The work will be divided by sector and/or sector and gas. Experts are expected to draft sections of individual review reports relating to the sectors and/or gases they assessed and additionally consider the response from Parties to the draft report and revise it accordingly. If necessary, experts may request additional information from Parties via the

secretariat. One to three weeks of an expert's time may be required for the review of inventories and preparation of the report and for consideration of responses from Annex I Parties.

28. While testing the second approach, meeting in a single location, meetings will be scheduled in the period 2000-2002, each covering individual review of three to five inventories. Each meeting is expected to last one to two weeks and result in draft individual review reports. Experts are expected to familiarize themselves with the inventory submissions prior to the meeting. If necessary, they could request additional material from Parties via the secretariat both prior to and during the meeting. Additional time may be required after the meeting for consideration by experts of responses from Annex I Parties to questions and/or to comments on the draft report.

29. Six to eight visits are scheduled to test the third approach, in-country review. These country visits will in principle last no more than one week resulting in a draft individual review report. Experts are expected to familiarize themselves with the inventory submission prior to the visit. Additional time may be required after the meeting for consideration by experts of responses from Annex I Parties to questions that could not be answered during the visit.

PART III

Operational arrangements

Invitation

30. During the trial period, Annex I Parties are expected to subject their inventories to the technical review process on a voluntary basis. Parties wishing to do so should notify the secretariat accordingly. The secretariat will then agree on the approach for the review and arrange dates for the individual review, in agreement with the Party concerned.

Government focal points

31. Annex I Parties volunteering for the technical review of their national inventory submission should designate a single organization with which the secretariat, and experts when necessary, could exchange information at all stages of the review process. Furthermore, the secretariat should be provided with the name of a principal focal point within that organization along with the names of other officials who may be contacted in the absence of the focal point. In general, the secretariat will be the central point for all information flows between experts nominated by Parties and Annex I Parties being reviewed.

Publication of reports

32. The status, synthesis and assessment and individual inventory reports will be published on the UNFCCC web site and may be published as official UNFCCC documents if Parties so decide.

Facilitation of reviews by Parties

33. In all stages of the review process, Parties may receive via the secretariat questions or requests for additional information. The Parties should aim to respond within four weeks to enable their comments to be incorporated in the draft report at whichever stage. The Parties will also be sent drafts of their status report, the relevant country section of the synthesis and assessment report and their individual inventory report. To facilitate the conduct of an efficient review process, replies to any accompanying questions and comments on the draft reports should be provided within four weeks. Every effort will be made to reach agreement with the Party on the content of a report prior to its publication. In the case of a Party and the expert team being unable to agree on an issue, the Party may provide explanatory text to be included in a separate section of the report.

34. In the case of country visits, the Party is expected to facilitate the review through the provision, for example, of adequate working space for the team, computer facilities and communications, as well as access to relevant documentation and staff.

Nomination of experts

35. Any Party may nominate experts to be included in the roster maintained by the secretariat using the agreed nomination form, accompanied by an official letter and curriculum vitae of the experts. It is expected that a Party would nominate a reasonable number of experts, taking into account the limited number of reviews during the trial period. Intergovernmental organizations, if invited by the secretariat, may also nominate experts on the same basis. The secretariat will regularly inform Parties on the status of nominations. It is expected that, in general, such experts will be available to take part in review activities, either based in their own offices, at the secretariat in Bonn or in a country being reviewed. Having agreed to take part in a particular synthesis and assessment or individual review, the expert and his or her respective employer are then expected to fully commit the required time.

36. Expenses associated with the participation of Annex II experts will be borne by their respective governments. The secretariat will fund the travel and subsistence expenses of experts from non-Annex I Parties and Annex I Parties with economies in transition, according to its current practice and in the limits of the available budget.

Selection of experts

37. Following the agreed dates for the review, the secretariat will select experts for participation from the roster of inventory experts in consultation with the chairpersons of the subsidiary bodies. Experts will be selected on the basis of their expertise in particular areas, language ability and availability. Furthermore, the secretariat will aim to achieve a geographic balance in the selection of an expert team. The majority of any team should be made up of

government-nominated experts. The secretariat will coordinate all administrative arrangements for the participation of Parties and experts in these reviews.

Participation of the experts

38. The experts are expected to produce reports, or sections of reports, as appropriate, under their collective responsibility written in non-confrontational language and coordinated by the secretariat. They are expected to take into account, in particular, the purposes of the review described in part I of these guidelines.

Annex II

PRELIMINARY ELEMENTS OF A DRAFT DECISION ON A TECHNICAL REVIEW PROCESS FOR GREENHOUSE GAS INVENTORIES OF ANNEX I PARTIES*

The Conference of the Parties

1. Adopts the guidelines for the technical review process related to greenhouse gas inventories of Annex I Parties contained in annex I to this decision;

2. Requests the secretariat to conduct annual initial checks and prepare annual synthesis and assessment reports of greenhouse gas inventories for all Annex I Parties beginning in 2000, according to the above-mentioned guidelines for the technical review process;

3. Decides to initiate individual reviews of inventories coordinated by the secretariat for a limited number of Annex I Parties during the period 2000 to 2002, according to the above-mentioned guidelines for the technical review process;

4. Requests the secretariat to coordinate the inventory reviews in accordance with the operational arrangements identified in the work plan;

5. Requests the subsidiary bodies to evaluate, after 2002, the experience gained with the review process conducted in accordance with paragraphs 2 and 3 above, with a view to adopting revised guidelines and/or operational arrangements for the technical review of inventories;

6. Invites Annex I Parties which are in a position to do so, to subject their inventories to an individual technical review in the period 2000 to 2002;

7. Decides to initiate individual reviews of inventories for all Annex I Parties in 2003; and

8. Invites Parties to nominate inventory experts with expertise in relevant sectors by 15 April 2000.

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* Reproduced from the report of the SBI on is tenth session (FCCC/SBI/1999/8, annex I).